

Serial No.: 10/734,281
Atty. Docket No.: P68425US1

REMARKS

This Amendment is being filed concurrently with an RCE.

The Office Action mailed April 10, 2008, has been carefully reviewed and, to expedite prosecution, Applicant requested a personal interview which was conducted by Examiner Chapman on October 8, 2008. Applicant and the undersigned attended the interview as did Mr. Shelton Stringer. Applicant sincerely thanks Examiner Chapman for her time and cordiality in conducting the interview.

During the interview, the prior art patents to Cody et al. ("Cody") (U.S. Patent No. 6,665,990), Mochida et al. ("Mochida") (U.S. Patent No. 5,289,626), Chitis (U.S. Patent No. 4,060,994) and Henderson et al. ("Henderson") (U.S. Patent No. 5,586,417) were discussed. Applicant presented and discussed a series of photographs depicting the steps taken in constructing a foundation as claimed by the present invention. Applicant also explained many of the differences between the claimed foundation and the structures shown in the prior art patents to Cody, Mochida, Chitis and Henderson.

Now responding to the Office Action mailed April 10, 2008, by this Amendment Applicant has amended claims 1, 8, 9, 13, 18 and 19, and added claims 20-23 and 25-32. Claims 1, 4-10 and

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13-19 are pending in the application. Claims 15-17 have been withdrawn. Claims 1, 8, 15 and 24 are independent.

As an initial matter, Applicant has amended the specification to correct a typographical error noted therein.

The Examiner rejected claims 1, 4-10, 13-15, 18 and 19 under 35 U.S.C. 112, second paragraph, as being indefinite. In particular, the Examiner indicated that the text relating to the compression area at lines 6-7 of claim 1 conflicts with later text in the claim. The Examiner also stated that claims 18 and 19 have no clear meaning.

With the amendments set forth herein, and as discussed during the interview, claim 1 has been clarified to state that the pile anchors according to the present invention include a compressible region or void that is created by a blockout element positioned between the upper end of the column of cementitious material of each of the pile anchors and a bottom surface of the foundation cap. To enable the pile anchors to be post-tensioned, a vertically oriented tension member is placed in the column of cementitious material and extends upwardly through the void or compressible region and then through the cap. A post-tensioning assembly on the upper end of the tension member that projects above the cap can then be used to post-tension the pile anchor. Because

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of the compressible region or void at the upper end of each of the pile anchors, post-tensioning results in the pile anchors moving upwardly while the foundation cap is pressed downwardly, increasing the resistance of the resulting foundation to any overturning and/or uplifting forces to which it is subjected. As this is clearly set forth in the currently pending claims, withdrawal of the rejection of claim 1 is requested. Claims 18 and 19 have also been amended and are in conformity with 35 U.S.C. 112, second paragraph.

The Examiner rejected claims 1, 3-5, 8, 18 and 19 under 35 U.S.C. 103(a) as being unpatentable over Cody in view of Mochida and Chitis. Also under 35 U.S.C. 103(a), the Examiner rejected claims 6, 7, 9, 10, 13 and 14 as being unpatentable over Cody in view of Mochida and Chitis and further in view of Henderson.

As set forth in claims 1 and 8 as amended herein, the present invention is directed to a pile anchor foundation for supporting a heavy load from a ground surface. The pile anchor foundation includes a concrete foundation cap having a bottom surface engaged with the ground surface and an upper surface supporting a heavy load connected rigidly thereto. A plurality of elongated pile anchors, each including cementitious material, extend a substantial vertical depth into the soil underlying the

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foundation cap. Each of the pile anchors further includes a tension member anchored therein that extends from the lower end of the cementitious material of the respective pile anchor upwardly through the cap. The upper end of each tension member, which projects above the cap, includes a post tensioning assembly which engages the upper surface of the cap when the tension member is post-tensioned. According to the claimed invention, the process of post-tensioning results in both the foundation cap being pulled downwardly and the pile anchors being pulled upwardly so that the cap compresses the underlying soil forming the ground surface and the pile anchors transfer tension against the surrounding soil. *The upward movement of the pile anchors is made possible by a void or compressible region which is formed by a blackout element between the upper surface of the pile anchor cementitious material and a lower surface of the foundation cap (see page 5, lines 8-11; page 15, lines 18-20; page 18, lines 3-10).* This void or compressible region as formed by the blackout element is not shown by the prior art.

Cody teaches an above ground tower foundation including tension/compression components 16 *secured directly* to the base of a ground level cap 14. The tension/compression components 16 are preferably spin-fin piles which are driven into the soil with the

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amount of energy required to drive the piles to their final depth determining the tension-compression capacity of each component (column 5, lines 41-43). As clearly shown in Figures 1, 2 and 8-11, there is no gap or void between the bottom of the cap 14 and the tops of the piles 16. On the contrary, the piles are secured in a fixed relationship with the cap. Further, Cody does not post-tension the spin-fin piles and therefore does not include tension members. Nor would there be any reason to modify Cody to include tension members since the fixed relationship between the piles and the cap would effectively prevent the development of any tension forces therebetween.

Mochida discloses a pile anchor having steel anchor plates 6-1 and 6-2 which the Examiner stated as representing a short length of *compressible material* 6. Without addressing the extent to which steel plates can fairly be considered to be "compressible", Applicant notes that the amendments to claims 1 and 8 set forth herein and further defining the compressible region clearly place Mochida outside the scope of the presently claimed invention. More particularly, Mochida does not teach or suggest a *blockout element that forms a void or compressible region between the upper surface of the pile anchor cementitious material and a lower surface of the foundation cap*, as set forth in claim 1. Nor

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does Mochida disclose pile anchors that include an elongated corrugated pipe substantially filled with cementitious material, the tension member being generally centralized therein, with the uppermost end of each corrugated pipe forming a void or gap between an upper surface of the cementitious material in the pipe and a lower surface of the foundation cap as in claim 8. On the contrary, the upper end of the foundation anchor T of Mochida is in direct abutment with the bottom surface of the bearing plate 5 which is, in turn, in direct abutment with the concrete structure body K (see Figures 1, 2 and 9). There is no void or compressible region as claimed by the present invention.

Finally, Chitis and Henderson also lack any teaching or suggestion of a blockout member forming a void or compressible region between the upper surface of the pile anchor cementitious material and a bottom surface of the foundation cap and, in fact, these two patents were not cited by the Examiner as disclosing this structure.

In sum, the pile anchor foundation as claimed herein provides a structure that is both not shown in the prior art and which is unmatched by the prior art in terms of the magnitude of load that it can support. Through the formation of pile anchors including cementitious material, an upper surface of which is

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separated from the bottom of the foundation cap by a void or compressible region that is spanned by a tension member anchored in the pile anchors and extending through the foundation cap for post-tensioning, significant compression and post-tensioning of the foundation can be achieved through a reducing of the vertical extent of the void or compressible region, enabling the foundation to support tower loads of a magnitude that is simply not possible with the prior art structures.

For at least the foregoing reasons, claims 1 and 8 are patentable over the prior art. New claim 24 is also patentable over the prior art for the same reasons as claims 1 and 8. Favorable consideration and allowance of claims 1, 8 and 24 is therefore requested.

Claims 4-7, 9, 10, 13, 14, 18-23 and 25-32 are also in condition for allowance as claims properly dependent on an allowable base claim and for the subject matter contained therein.

With this amendment and the foregoing remarks, it is respectfully submitted that the present application is in condition for examination on the merits.

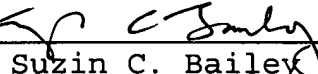
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Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

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Date: October 10, 2008
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